



Baseline Air Sampling Report

American Crossarm & Conduit Remedial Action Chehalis, Washington

EPA REGION X

Contract No. 68-W9-0046
Work Assignment No. 46-36-0R91
Work Order No. 4000-030-001-3400
Document Control No. 4000-030-001-AAHZ

May 1995

**BASELINE AIR SAMPLING REPORT
AMERICAN CROSSARM & CONDUIT REMEDIAL ACTION
CHEHALIS, WASHINGTON**

Prepared for

**U.S. Environmental Protection Agency
Region X
1200 Sixth Avenue
Seattle, Washington 98101**

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Prepared by

**Roy F. Weston, Inc.
700 Fifth Avenue
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Seattle, WA 98104**

ARCS QUALITY ASSURANCE CONCURRENCE

**BASELINE AIR SAMPLING REPORT
American Crossarm & Conduit Remedial Action
Chehalis, Washington**


Project Name: Baseline Air Sampling Report

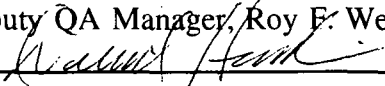
Contract Number: 68-W9-0046

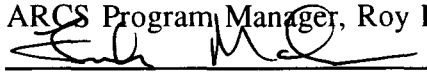
Work Assignment Number: 46-36-0R91

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INTRODUCTION

Three phases of air sampling will be conducted during the course of remediation activities: baseline sampling; initial (startup) sampling; and subsequent monthly sampling. This report presents results of the baseline sampling effort.

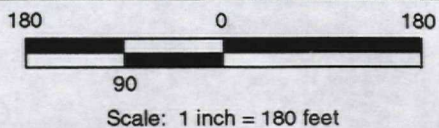
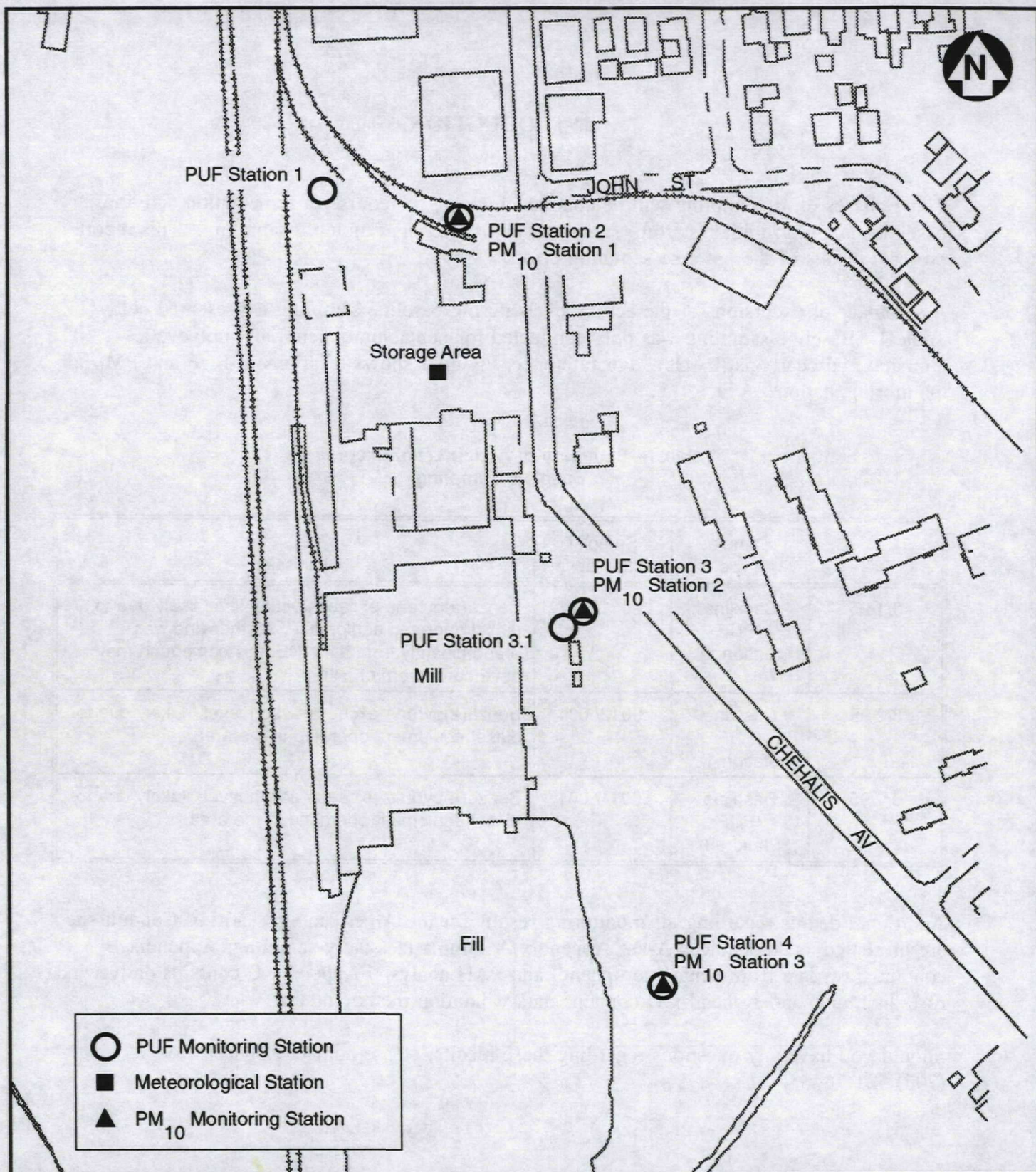
A summary of excursions of the action levels during baseline sampling is presented below in Table 1. Baseline sampling was only conducted for pentachlorophenol and polycyclic aromatic hydrocarbons (PAHs). For reference, Figure 1 shows locations of PUF and PM₁₀ air monitoring stations.

**Table 1—Summary of Action Level Excursions
Baseline Sampling**

Day	Sample Type	Sample/ Action Level	Discussion
3/1/95	Baseline (PUF Station 1)	.0011/.001	Benzo(a)pyrene exceeds action level likely due to diesel operated equipment. As the wind was predominantly from the NNE, this compound may have come from off-site.
3/2/95	Baseline (PUF Station 1)	.0012/.001	Benzo(a)pyrene exceeds action level. Likely due to diesel equipment operated in the area.
3/2/95	Baseline (PUF Station 3)	.0011/.001	Benzo(a)pyrene exceeds action level. Likely due to diesel equipment operating in the area.

Additional details regarding air monitoring results for the American Crossarm & Conduit site are presented as Appendices A-D. Appendix A summarizes daily sampling; Appendix B contains raw data from pentachlorophenol and PAH analysis; Appendix C contains daily wind rose diagrams; and Appendix D contains data validation memorandums.

Should you have any questions regarding these results, please contact Rebecca Doe at (206) 521-7648.



American Crossarm & Conduit Air Monitoring Stations

APPENDIX A

SUMMARY OF DAILY SAMPLING

**DAILY REPORT
BASELINE AIR SAMPLING
1 MARCH 1995**

Wind

Winds were moderate, predominantly (59 percent) from the east-northeast at speeds less than 12 miles per hour.

Sample Results

Three samples were collected for polycyclic aromatic hydrocarbons (PAHs) and pentachlorophenol. Air monitoring was also conducted for PM₁₀. Airborne concentrations of these contaminants were below site-specific action levels except for benzo(a)pyrene at Station #1.

Duplicate/Co-Located Sample Analysis

- ☐ A duplicate sample was collected for PAHs and pentachlorophenol. There is good correlation between the duplicates (<35 percent relative percent difference).
- ☒ No duplicates were collected during this sampling event.

Trip and Field Blanks

- ☐ No PAHs or pentachlorophenol were detected in a trip blank.
- ☐ No PAHs or pentachlorophenol were detected in a field blank.
- ☒ No trip or field blanks were collected.

Site Activities During Sampling

Chemical Waste Management, Inc., crushed empty 55-gallon drums. E.P. Johnson hauled clean gravel on-site to construct the haul road for debris removal.

Action Level Excursions

Benzo(a)pyrene exceeded the action limit at Station #1. This was likely due to the use of diesel-operated equipment being utilized in the immediate vicinity of PUF air sampling

equipment. There were no intrusive activities being conducted that would liberate PAHs from contaminated materials on-site.

Other Issues

Due to problems encountered establishing computer communication links, no data were collected for PM₁₀ measurements. This problem was rectified after 3/6/95.

PAH and Pentachlorophenol Baseline Sampling Results by Station Location
American Crossarm & Conduit Site, Chehalis, WA
Date: 1 MARCH 1995

Concentration (μm^3)	Station Number							Action Level ¹
	1	2	3	3 dup	4	5	6	
Benzo(a)anthracene	.0007	.0009	.0008					0.01
Benzo(a)pyrene	.0011	.0009	.0008					0.001
Benzo(b)fluoranthene	.0011	.0012	.0013					0.01
Benzo(g,h,i)perylene	.0015	.0019	.0013					0.01230
Benzo(k)fluoranthene	.0011	.0012	.0013					0.01
Chrysene	.0015	.0016	.0016					1.0
Dibenzo(a,h)anthracene	.0003	.0002	.0002					0.001
Indeno(1,2,3-cd)pyrene	.0007	.0006	.0005					0.01
Pentachlorophenol	.0003 J	.0031 J	.0019 J					0.052

Note: Only sample locations 1, 2, and 3 were utilized for this sampling event; no duplicate samples were collected.

J = estimated value.

¹ With the exception of Benzo(g,h,i)perylene, action levels were taken from EPA Region III "Risk Based Concentration Table," February 1995. The action level for Benzo(g,h,i)perylene was taken from the Washington State Department of Ecology's Model Toxics Control Act Cleanup Levels and Risk Calculations (CLARC II) Update, January 1995.

**DAILY REPORT
BASELINE AIR SAMPLING
2 MARCH 1995**

Wind

Winds were moderate and variable, predominantly (50 percent) from the north-northeast at speeds less than twelve miles per hour.

Sample Results

Three samples were collected for PAHs and pentachlorophenol. Air monitoring was also conducted for PM₁₀. Airborne concentrations of these contaminants were below site-specific action levels, except for benzo(a)pyrene at Stations 1 and 3.

Duplicate/Co-Located Sample Analysis

- ☐ A duplicate sample was collected for PAHs and pentachlorophenol. There is good correlation between the duplicates (<35 percent relative percent difference).
- ☒ No duplicates were collected during this sampling event.

Trip and Field Blanks

- ☐ No PAHs or pentachlorophenol were detected in a trip blank.
- ☐ No PAHs or pentachlorophenol were detected in a field blank.
- ☒ No trip or field blanks were collected.

Site Activities During Sampling

E.P. Johnson hauled in clean gravel for the haul road, graded it, and consolidated a clean debris pile at the southern end of the work site.

Action Level Excursions

Benzo(a)pyrene exceeded the action level at PUF Stations 1 and 3. This was likely due to diesel-operated equipment being utilized in the immediate vicinity of air sampling equipment. There were no intrusive activities being conducted that would liberate PAHs from contaminated materials on-site.

Other Issues

Due to problems encountered establishing computer communication links, no data were collected for PM₁₀ measurements. This problem was rectified after 3/6/95.

PAH and Pentachlorophenol Baseline Sampling Results by Station Location
American Crossarm & Conduit Site, Chehalis, WA
Date: 2 MARCH 1995

Concentration (μm^3)	Station Number							Action Level ¹
	1	2	3	3 dup	4	5	6	
Benzo(a)anthracene	.0012	.0010	.0011					0.01
Benzo(a)pyrene	.0012	.0010 J	.0011					0.001
Benzo(b)fluoranthene	.0015	.0013 J	.0013					0.01
Benzo(g,h,i)perylene	.0015	.0013	.0013					0.01230
Benzo(k)fluoranthene	.0015	.0013 J	.0016					0.01
Chrysene	.0021	.0020	.0019					1.0
Dibenzo(a,h)anthracene	.0002	.0002 J	.0002					0.001
Indeno(1,2,3-cd)pyrene	.0009	.0008 J	.0008					0.01
Pentachlorophenol	.0009 J	.0020 J	.0019 J					0.052

Note: Only sample locations 1, 2, and 3 were utilized for this sampling event; no duplicate samples were collected.

J = estimated value.

¹ With the exception of Benzo(g,h,i)perylene, action levels were taken from EPA Region III "Risk Based Concentration Table," February 1995. The action level for Benzo(g,h,i)perylene was taken from the Washington State Department of Ecology's Model Toxics Control Act Cleanup Levels and Risk Calculations (CLARC II) Update, January 1995.

**DAILY REPORT
BASELINE AIR SAMPLING
3 MARCH 1995**

Wind

Winds were moderate, predominantly (64 percent) from the south-southeast at speeds less than twelve miles per hour.

Sample Results

Four samples were collected for PAHs and pentachlorophenol. Air monitoring was also conducted for PM_{10} . Airborne concentrations of these contaminants were below site-specific action levels.

Duplicate/Co-Located Sample Analysis

- ☒ A duplicate sample was collected for PAHs and pentachlorophenol. There is good correlation between the duplicates (<35 percent relative percent difference).
- ☐ No duplicates were collected during this sampling event.

Trip and Field Blanks

- ☐ No PAHs or pentachlorophenol were detected in a trip blank.
- ☐ No PAHs or pentachlorophenol were detected in a field blank.
- ☒ No trip or field blanks were collected.

Site Activities During Sampling

There were no work site activities today.

Action Level Excursions

No excursions were reported.

Other Issues

The PM₁₀ monitor at beta gauge Station 1 was malfunctioning. This was determined on 3/29/95. At this time, it was shipped back to the manufacturer for repair.

PAH and Pentachlorophenol Baseline Sampling Results by Station Location
American Crossarm & Conduit Site, Chehalis, WA
Date: 3 MARCH 1995

Concentration (μm^3)	Station Number							Action Level ¹
	1	2	3	3 dup	4	5	6	
Benzo(a)anthracene	.0003	.0006	.0003	.0003				0.01
Benzo(a)pyrene	.0003	.0003	.0003	.0002				0.001
Benzo(b)fluoranthene	.0011	.0017	.0015	.0015				0.01
Benzo(g,h,i)perylene	.0003	.0003	.0003	.0003				0.01230
Benzo(k)fluoranthene	.0006 J	.0006 J	.0006 J	.0006 J				0.01
Chrysene	.0011	.0017	.0015	.0015				1.0
Dibenzo(a,h)anthracene	.0001	.0001	.0001	.0001				0.001
Indeno(1,2,3-cd)pyrene	.0003	.0003	.0003	.0003				0.01
Pentachlorophenol	.0023 UBJ	.0087 J	.0000 UBJ	.0006 UBJ				0.052

Note: Only sample locations 1, 2, and 3 were utilized for this sampling event.

J = estimated value.

UBJ = undetected because of blank contamination; estimated value.

¹ With the exception of Benzo(g,h,i)perylene, action levels were taken from EPA Region III "Risk Based Concentration Table," February 1995. The action level for Benzo(g,h,i)perylene was taken from the Washington State Department of Ecology's Model Toxics Control Act Cleanup Levels and Risk Calculations (CLARC II) Update, January 1995.

**DAILY REPORT
BASELINE AIR SAMPLING
4 MARCH 1995**

Wind

Winds were moderate and variable, predominantly (58 percent) from the south-southwest at speeds less than twelve miles per hour.

Sample Results

Three samples were collected for PAHs and pentachlorophenol. Air monitoring was also conducted for PM₁₀. Airborne concentrations of these contaminants were below site-specific action levels.

Duplicate/Co-Located Sample Analysis

- ☐ A duplicate sample was collected for PAHs and pentachlorophenol. There is good correlation between the duplicates (<35 percent relative percent difference).
- ☒ No duplicates were collected during this sampling event.

Trip and Field Blanks

- ☐ No PAHs or pentachlorophenol were detected in a trip blank.
- ☐ No PAHs or pentachlorophenol were detected in a field blank.
- ☒ No trip or field blanks were collected.

Site Activities During Sampling

There were no work site activities today.

Action Level Excursions

No excursions were reported.

Other Issues

The PM₁₀ monitor at beta gauge Station 1 was malfunctioning. This was determined on 3/29/95. At this time, it was shipped back to the manufacturer for repair. Stockton Analytical Laboratory was not able to analyze sample ACC-B01-950304 due to instrument problems.

PAH and Pentachlorophenol Baseline Sampling Results by Station Location
American Crossarm & Conduit Site, Chehalis, WA
Date: 4 MARCH 1995

Concentration (μm^3)	Station Number							Action Level ¹
	1	2	3	3 dup	4	5	6	
Benzo(a)anthracene	NR	.0002	.0002					0.01
Benzo(a)pyrene	NR	.0001	.0001					0.001
Benzo(b)fluoranthene	NR	.0006	.0007					0.01
Benzo(g,h,i)perylene	NR	.0002	.0002					0.01230
Benzo(k)fluoranthene	NR	.0002 J	.0002 J					0.01
Chrysene	MR	.0009	.0007					1.0
Dibenzo(a,h)anthracene	NR	.0000	.0000					0.001
Indeno(1,2,3-cd)pyrene	NR	.0002	.0002					0.01
Pentachlorophenol	NR	.0022 UBJ	.0001 UBJ					0.052

Note: Only sample locations 1, 2, 3, and 3 duplicate were utilized for this sampling event.

J = estimated value.

NR = no results could be obtained.

UBJ = undetected because of blank contamination; estimated value.

¹ With the exception of Benzo(g,h,i)perylene, action levels were taken from EPA Region III "Risk Based Concentration Table," February 1995. The action level for Benzo(g,h,i)perylene was taken from the Washington State Department of Ecology's Model Toxics Control Act Cleanup Levels and Risk Calculations (CLARC II) Update, January 1995.

**DAILY REPORT
BASELINE AIR SAMPLING
6 MARCH 1995**

Wind

Winds were moderate and variable, predominantly (19 percent) from the south at speeds less than twelve miles per hour.

Sample Results

Three samples were collected for PAHs and pentachlorophenol. Air monitoring was also conducted for PM_{10} . Airborne concentrations of these contaminants were below site-specific action levels.

Duplicate/Co-Located Sample Analysis

- ☐ A duplicate sample was collected for PAHs and pentachlorophenol. There is good correlation between the duplicates (<35 percent relative percent difference).
- ☒ No duplicates were collected during this sampling event.

Trip and Field Blanks

- ☒ No PAHs or pentachlorophenol were detected in a trip blank.
- ☒ No PAHs or pentachlorophenol were detected in a field blank.
- ☐ No trip or field blanks were collected.

Site Activities During Sampling

E.P. Johnson hauled in clean gravel for the haul road and graded it.

Action Level Excursions

No excursions were reported.

Other Issues

The PM₁₀ monitor at beta gauge Station 1 was malfunctioning. This was determined on 3/29/95. At this time, it was shipped back to the manufacturer for repair.

PAH and Pentachlorophenol Baseline Sampling Results by Station Location
American Crossarm & Conduit Site, Chehalis, WA
Date: 6 MARCH 1995

Concentration (μm^3)	Station Number						Action Level ¹
	1	2	3	Trip Blank	Field Blank	4	5
Benzo(a)anthracene	.0010	.0010	.0007	.0000 U	.0000 U		0.01
Benzo(a)pyrene	.0010	.0010	.0010	.0000 U	.0000 U		0.001
Benzo(b)fluoranthene	.0013	.0013	.0012	.0000 U	.0000 U		0.01
Benzo(g,h,i)perylene	.0010	.0008	.0007	.0000 U	.0000 U		0.01230
Benzo(k)fluoranthene	.0010 J	.0010 J	.0007 J	.0000 U	.0000 U		0.01
Chrysene	.0015	.0015	.0012	.0000 U	.0000 U		1.0
Dibenzo(a,h)anthracene	.0002	.0002	.0001	.0000 U	.0000 U		0.001
Indeno(1,2,3-cd)pyrene	.0008	.0008	.0005	.0000 U	.0000 U		0.01
Pentachlorophenol	.0013 UBJ	.0025 UBJ	.0049 J	.0000 U	1.0000 J		0.052

Note: Only sample locations 1, 2, 3, and 4 were utilized for this sampling event. The Field blank was collected at Station 4.

J = estimated value.

U = undetected.

UBJ = undetected because of blank contamination; estimated value.

¹ With the exception of Benzo(g,h,i)perylene, action levels were taken from EPA Region III "Risk Based Concentration Table," February 1995. The action level for Benzo(g,h,i)perylene was taken from the Washington State Department of Ecology's Model Toxics Control Act Cleanup Levels and Risk Calculations (CLARC II) Update, January 1995.

APPENDIX B

PCP AND PAH ANALYTICAL DATA

SAMPID: ACC-B01-950301 LOCATION: 1 BATCH #: 9503S290-001 ☒ SAMPLE
 DUPLICATE OF: START DATE: 3/1/95 END DATE: 3/2/95 ☐ DUPLICATE
 FILTER #: START TIME: 09:34 END TIME: 10:02 ☐ BLANK

CAL TYPE: ☒ PRESSURE ☐ FLOW ☒ ACTUAL FLOW ☐ STANDARD FLOW

PUMP / SAMPLER ID: 1 TEMP: 0 (° F) BAROMETRIC PRESS: 0 (Inches)

METER UNITS: ☐ HOURS ☒ MINUTES METER TIME: 69916 to 71384 MINUTES

GUAGE PRE: 29 GUAGE POST: 26 CAL Y INTERCEPT: -0.62 CAL SLOPE: 31.26772

FLOW: UNITS: CFM PRE: 0: 0: 0 = 0: POST: 0: 0: 0 = 0:

FLOW RATE: 6.6199 CFM VOLUME: 275.0215191 (CUBIC METERS)

RESULT UNITS: ug	ANALYTE NAME	RESULT	Q	CONCENTRATION	Q2
CONC. UNITS: ug/cubic meter	Pentachlorophenol	0.09	J	0.0003	
	Benzo(a)anthracene	0.2		0.0007	
	Chrysene	0.4		0.0015	
	Benzo(b)fluoranthene	0.3		0.0011	
	Benzo(k)fluoranthene	0.3		0.0011	
	Benzo(a)pyrene	0.3		0.0011	
	Indeno(1,2,3-cd)pyrene	0.2		0.0007	
	Dibenzo(a,h)anthracene	0.07		0.0003	
	Benzo(g,h,i)perylene	0.4		0.0015	

Butto

SAMPID: ACC-B02-950301 LOCATION: 2 BATCH #: 9503S290 ☒ SAMPLE
 DUPLICATE OF: START DATE: 3/1/95 END DATE: 3/2/95 ☐ DUPLICATE
 FILTER #: START TIME: 09:07 END TIME: 09:45 ☐ BLANK

CAL TYPE: ☒ PRESSURE ☐ FLOW ☒ ACTUAL FLOW ☐ STANDARD FLOW

PUMP / SAMPLER ID: 2 TEMP: 0 (° F) BAROMETRIC PRESS: 0 (inches)

METER UNITS: ☐ HOURS ☒ MINUTES METER TIME: 60404 to 61880 MINUTES

GUAGE PRE: 60 GUAGE POST: 56 CAL Y INTERCEPT -0.19 CAL SLOPE 35.76994

FLOW: UNITS: CFM PRE: 0 0 0 = 0 POST: 0 0 0 = 0

FLOW RATE: 7.7063 CFM VOLUME: 321.89669410 (CUBIC METERS)

RESULT UNITS: ug
 CONC. UNITS: ug/cubic meter

ANALYTE NAME	RESULT	Q	CONCENTRATION	Q2
Pentachlorophenol	1	J	0.0031	
Benzo(a)anthracene	0.3		0.0009	
Chrysene	0.5		0.0016	
Benzo(b)fluoranthene	0.4		0.0012	
Benzo(k)fluoranthene	0.4		0.0012	
Benzo(a)pyrene	0.3		0.0009	
Indeno(1,2,3-cd)pyrene	0.2		0.0006	
Dibenzo(a,h)anthracene	0.06		0.0002	
Benzo(g,h,i)perylene	0.6		0.0019	

Butto

SAMPID: ACC-B03-950301 LOCATION: 3 BATCH #: 9503S290 ☒ SAMPLE
 DUPLICATE OF: START DATE: 3/1/95 END DATE: 3/2/95 ☐ DUPLICATE
 FILTER #: START TIME: 10:25 END TIME: 10:26 ☐ BLANK

CAL TYPE: ☒ PRESSURE ☐ FLOW ☒ ACTUAL FLOW ☐ STANDARD FLOW

PUMP / SAMPLER ID: 3 TEMP: 0 (° F) BAROMETRIC PRESS: 0 (inches)

METER UNITS: ☐ HOURS ☒ MINUTES METER TIME: 58378 to 59819 MINUTES

GUAGE PRE: 56 GUAGE POST: 54 CAL Y INTERCEPT: -0.49 CAL SLOPE: 30.70878

FLOW: UNITS: CFM PRE: 0 0 0 = 0 POST: 0 0 0 = 0

FLOW RATE: 9.0882 CFM VOLUME: 370.61808507 (CUBIC METERS)

RESULT UNITS: ug	ANALYTE NAME	RESULT	Q	CONCENTRATION	Q2
CONC. UNITS ug/cubic meter	Pentachlorophenol	0.7	J	0.0019	
	Benzo(a)anthracene	0.3		0.0008	
	Chrysene	0.6		0.0016	
	Benzo(b)fluoranthene	0.5		0.0013	
	Benzo(k)fluoranthene	0.5		0.0013	
	Benzo(a)pyrene	0.3		0.0008	
	Indeno(1,2,3-cd)pyrene	0.2		0.0005	
	Dibenzo(a,h)anthracene	0.06		0.0002	
	Benzo(g,h,i)perylene	0.5		0.0013	

Butto

SAMPID: ACC-B01-950302		LOCATION: 1		BATCH #: 9503S290		<input checked="" type="checkbox"/> SAMPLE <input type="checkbox"/> DUPLICATE <input type="checkbox"/> BLANK	
DUPLICATE OF:		START DATE: 3/2/95		END DATE: 3/3/95			
FILTER #:		START TIME: 10:13		END TIME: 10:36			
CAL TYPE: <input checked="" type="checkbox"/> PRESSURE <input type="checkbox"/> FLOW <input checked="" type="checkbox"/> ACTUAL FLOW <input type="checkbox"/> STANDARD FLOW							
PUMP / SAMPLER ID: 1		TEMP: 0 (° F)		BAROMETRIC PRESS: 0 (inches)			
METER UNITS: <input type="checkbox"/> HOURS <input checked="" type="checkbox"/> MINUTES		METER TIME: 71388 to 72851 MINUTES					
GUAGE PRE: 42		GUAGE POST: 40		CAL Y INTERCEPT: -0.62		CAL SLOPE: 31.26772	
FLOW: UNITS: CFM PRE: 0 0 0 = 0 POST: 0 0 0 = 0							
FLOW RATE: 7.9305 CFM VOLUME: 328.34711627 (CUBIC METERS)							

RESULT UNITS: ug CONC. UNITS: ug/cubic meter	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>ANALYTE NAME</th> <th>RESULT</th> <th>Q</th> <th>CONCENTRATION</th> <th>Q2</th> </tr> </thead> <tbody> <tr> <td>Pentachlorophenol</td> <td>0.3</td> <td>J</td> <td>0.0009</td> <td></td> </tr> <tr> <td>Benzo(a)anthracene</td> <td>0.4</td> <td></td> <td>0.0012</td> <td></td> </tr> <tr> <td>Chrysene</td> <td>0.7</td> <td></td> <td>0.0021</td> <td></td> </tr> <tr> <td>Benzo(b)fluoranthene</td> <td>0.5</td> <td></td> <td>0.0015</td> <td></td> </tr> <tr> <td>Benzo(k)fluoranthene</td> <td>0.5</td> <td></td> <td>0.0015</td> <td></td> </tr> <tr> <td>Benzo(a)pyrene</td> <td>0.4</td> <td></td> <td>0.0012</td> <td></td> </tr> <tr> <td>Indeno(1,2,3-cd)pyrene</td> <td>0.3</td> <td></td> <td>0.0009</td> <td></td> </tr> <tr> <td>Dibenzo(a,h)anthracene</td> <td>0.06</td> <td></td> <td>0.0002</td> <td></td> </tr> <tr> <td>Benzo(g,h,i)perylene</td> <td>0.5</td> <td></td> <td>0.0015</td> <td></td> </tr> </tbody> </table>	ANALYTE NAME	RESULT	Q	CONCENTRATION	Q2	Pentachlorophenol	0.3	J	0.0009		Benzo(a)anthracene	0.4		0.0012		Chrysene	0.7		0.0021		Benzo(b)fluoranthene	0.5		0.0015		Benzo(k)fluoranthene	0.5		0.0015		Benzo(a)pyrene	0.4		0.0012		Indeno(1,2,3-cd)pyrene	0.3		0.0009		Dibenzo(a,h)anthracene	0.06		0.0002		Benzo(g,h,i)perylene	0.5		0.0015	
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Benzo(g,h,i)perylene	0.5		0.0015																																																

SAMPID: ACC-B02-950302		LOCATION: 2		BATCH #: 95035S290		<input checked="" type="checkbox"/> SAMPLE <input type="checkbox"/> DUPLICATE <input type="checkbox"/> BLANK	
DUPLICATE OF:		START DATE: 3/2/95		END DATE: 3/3/95			
FILTER #:		START TIME: 09:59		END TIME: 10:29			
CAL TYPE: <input checked="" type="checkbox"/> PRESSURE <input type="checkbox"/> FLOW		<input checked="" type="checkbox"/> ACTUAL FLOW <input type="checkbox"/> STANDARD FLOW					
PUMP / SAMPLER ID: 2		TEMP: 0 (° F)		BAROMETRIC PRESS: 0 (inches)			
METER UNITS: <input type="checkbox"/> HOURS <input checked="" type="checkbox"/> MINUTES		METER TIME: 61880 to 63351 MINUTES					
GUAGE PRE: 60		GUAGE POST: 62		CAL Y INTERCEPT: -1.92		CAL SLOPE: 35.76994	
FLOW: UNITS: CFM		PRE: 0 0 0 = 0		POST: 0 0 0 = 0			
FLOW RATE: 9.6049 CFM		VOLUME: 399.84430165 (CUBIC METERS)					

RESULT UNITS: ug CONC. UNITS: ug/cubic meter	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>ANALYTE NAME</th> <th>RESULT</th> <th>Q</th> <th>CONCENTRATION</th> <th>Q2</th> </tr> </thead> <tbody> <tr><td>Pentachlorophenol</td><td>0.8</td><td>J</td><td>0.0020</td><td></td></tr> <tr><td>Benzo(a)anthracene</td><td>0.4</td><td></td><td>0.0010</td><td></td></tr> <tr><td>Chrysene</td><td>0.8</td><td></td><td>0.0020</td><td></td></tr> <tr><td>Benzo(b)fluoranthene</td><td>0.5</td><td>J</td><td>0.0013</td><td></td></tr> <tr><td>Benzo(k)fluoranthene</td><td>0.5</td><td>J</td><td>0.0013</td><td></td></tr> <tr><td>Benzo(a)pyrene</td><td>0.4</td><td>J</td><td>0.0010</td><td></td></tr> <tr><td>Indeno(1,2,3-cd)pyrene</td><td>0.3</td><td>J</td><td>0.0008</td><td></td></tr> <tr><td>Dibenzo(a,h)anthracene</td><td>0.06</td><td>J</td><td>0.0002</td><td></td></tr> <tr><td>Benzo(g,h,i)perylene</td><td>0.5</td><td>JJ</td><td>0.0013</td><td></td></tr> </tbody> </table>	ANALYTE NAME	RESULT	Q	CONCENTRATION	Q2	Pentachlorophenol	0.8	J	0.0020		Benzo(a)anthracene	0.4		0.0010		Chrysene	0.8		0.0020		Benzo(b)fluoranthene	0.5	J	0.0013		Benzo(k)fluoranthene	0.5	J	0.0013		Benzo(a)pyrene	0.4	J	0.0010		Indeno(1,2,3-cd)pyrene	0.3	J	0.0008		Dibenzo(a,h)anthracene	0.06	J	0.0002		Benzo(g,h,i)perylene	0.5	JJ	0.0013	
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Benzo(g,h,i)perylene	0.5	JJ	0.0013																																																

Butto

SAMPID: ACC-B03-950302 LOCATION: 3 BATCH #: 9503S290 ☒ SAMPLE
 DUPLICATE OF: ☐ START DATE: 3/2/95 END DATE: 3/3/95 ☐ DUPLICATE
 FILTER #: ☐ START TIME: 10:50 END TIME: 10:56 ☐ BLANK

CAL TYPE: ☒ PRESSURE ☐ FLOW ☒ ACTUAL FLOW ☐ STANDARD FLOW

PUMP / SAMPLER ID: 3 TEMP: 0 (° F) BAROMETRIC PRESS: 0 (inches)

METER UNITS: ☐ HOURS ☒ MINUTES METER TIME: 59819 to 61275 MINUTES

GUAGE PRE: 58 GUAGE POST: 53 CAL Y INTERCEPT: -0.49 CAL SLOPE: 30.70878

FLOW: UNITS: CFM PRE: 0 0 0 = 0 POST: 0 0 0 = 0

FLOW RATE: 9.1250 CFM VOLUME: 375.99447402 (CUBIC METERS)

RESULT UNITS: ug
 CONC. UNITS: ug/cubic meter

ANALYTE NAME	RESULT	Q	CONCENTRATION	Q2
Pentachlorophenol	0.7	J	0.0019	
Benzo(a)anthracene	0.4		0.0011	
Chrysene	0.7		0.0019	
Benzo(b)fluoranthene	0.5		0.0013	
Benzo(k)fluoranthene	0.6		0.0016	
Benzo(a)pyrene	0.4		0.0011	
Indeno(1,2,3-cd)pyrene	0.3		0.0008	
Dibenzo(a,h)anthracene	0.06		0.0002	
Benzo(g,h,i)perylene	0.5		0.0013	

Butto

SAMPID: ACC-B01-950303 LOCATION: 1 BATCH #: 9503S307 ☒ SAMPLE
 DUPLICATE OF: START DATE: 3/3/95 END DATE: 3/4/95 ☐ DUPLICATE
 FILTER #: START TIME: 10:39 END TIME: 09:03 ☐ BLANK

CAL TYPE: ☒ PRESSURE ☐ FLOW ☒ ACTUAL FLOW ☐ STANDARD FLOW

PUMP / SAMPLER ID: 1 TEMP: 0 (° F) BAROMETRIC PRESS: 0 (inches)

METER UNITS: ☐ HOURS ☒ MINUTES METER TIME: 72851 to 74195 MINUTES

GUAGE PRE: 55 GUAGE POST: 57 CAL Y INTERCEPT: -0.62 CAL SLOPE: 31.26772

FLOW: UNITS: CFM PRE: 0: 0: 0 = 0: POST: 0: 0: 0 = 0:

FLOW RATE: 9.1506 CFM VOLUME: 348.04385395 (CUBIC METERS)

RESULT UNITS: ug	ANALYTE NAME	RESULT	Q	CONCENTRATION	Q2
CONC. UNITS ug/cubic meter	Pentachlorophenol	0.8	U	0.0023	
	Benzo(a)anthracene	0.1		0.0003	
	Chrysene	0.4		0.0011	
	Benzo(b)fluoranthene	0.4		0.0011	
	Benzo(k)fluoranthene	0.2		0.0006	
	Benzo(a)pyrene	0.09		0.0003	
	Indeno(1,2,3-cd)pyrene	0.09		0.0003	
	Dibenzo(a,h)anthracene	0.03		0.0001	
	Benzo(g,h,i)perylene	0.1		0.0003	

Butto

SAMPID: ACC-B02-950303 LOCATION: 2 BATCH #: 9503S307 ☒ SAMPLE
 DUPLICATE OF ☐ START DATE: 3/3/95 END DATE: 3/4/95 ☐ DUPLICATE
 FILTER # ☐ START TIME: 10:23 END TIME: 09:55 ☐ BLANK

CAL TYPE: ☒ PRESSURE ☐ FLOW ☒ ACTUAL FLOW ☐ STANDARD FLOW

PUMP / SAMPLER ID: 2 TEMP: 0 (° F) BAROMETRIC PRESS: 0 (inches)

METER UNITS: ☐ HOURS ☒ MINUTES METER TIME: 63351 to 64693 MINUTES

GUAGE PRE: 54 GUAGE POST: 53 CAL Y INTERCEPT: -1.92 CAL SLOPE: 35.76994

FLOW: UNITS: CFM PRE: 0: 0: 0 = 0: POST: 0: 0: 0 = 0

FLOW RATE: 9.1156 CFM VOLUME: 346.19593976 (CUBIC METERS)

RESULT UNITS: ug	ANALYTE NAME	RESULT	Q	CONCENTRATION	Q2
CONC. UNITS: ug/cubic meter	Pentachlorophenol	3	J	0.0087	
	Benzo(a)anthracene	0.2		0.0006	
	Chrysene	0.6		0.0017	
	Benzo(b)fluoranthene	0.6		0.0017	
	Benzo(k)fluoranthene	0.2	J	0.0006	
	Benzo(a)pyrene	0.09		0.0003	
	Indeno(1,2,3-cd)pyrene	0.1		0.0003	
	Dibenzo(a,h)anthracene	0.03		0.0001	
	Benzo(g,h,i)perylene	0.1		0.0003	

Butto

SAMPID: ACC-B03-950303 LOCATION: 3 BATCH #: 9503S307 ☒ SAMPLE
 DUPLICATE OF ☐ START DATE: 3/3/95 END DATE: 3/4/95 ☐ DUPLICATE
 FILTER #: ☐ START TIME: 10:55 END TIME: 09:17 ☐ BLANK

CAL TYPE: ☒ PRESSURE ☐ FLOW ☒ ACTUAL FLOW ☐ STANDARD FLOW

PUMP / SAMPLER ID: 3 TEMP: 0 (° F) BAROMETRIC PRESS: 0 (Inches)

METER UNITS: ☐ HOURS ☒ MINUTES METER TIME: 61275 to 62616 MINUTES

GUAGE PRE: 52 GUAGE POST: 51 CAL Y INTERCEPT: -0.49 CAL SLOPE: 30.70878

FLOW: UNITS: CFM PRE: 0 0 0 = 0 POST: 0 0 0 = 0

FLOW RATE: 8.8126 CFM VOLUME: 334.44210457 (CUBIC METERS)

RESULT UNITS: ug	ANALYTE NAME	RESULT	Q	CONCENTRATION	Q2
CONC. UNITS ug/cubic meter	Pentachlorophenol	0.01	U	0.0000	
	Benzo(a)anthracene	0.1		0.0003	
	Chrysene	0.5		0.0015	
	Benzo(b)fluoranthene	0.5		0.0015	
	Benzo(k)fluoranthene	0.2	J	0.0006	
	Benzo(a)pyrene	0.09		0.0003	
	Indeno(1,2,3-cd)pyrene	0.09		0.0003	
	Dibenzo(a,h)anthracene	0.03		0.0001	
	Benzo(g,h,i)perylene	0.1		0.0003	

Butto

SAMPID: ACC-B3D-950303 LOCATION: 3D BATCH #: 9503S307
 DUPLICATE OF: START DATE: 3/3/95 END DATE: 3/4/95
 FILTER #: START TIME: 11:05 END TIME: 09:22

☐ SAMPLE
☒ DUPLICATE
☐ BLANK

CAL TYPE: ☒ PRESSURE ☐ FLOW ☒ ACTUAL FLOW ☐ STANDARD FLOW

PUMP / SAMPLER ID: 3.1 TEMP: 0 (° F) BAROMETRIC PRESS: 0 (Inches)

METER UNITS: ☒ HOURS ☐ MINUTES METER TIME: 1969.25 to 1991.5 HOURS

GUAGE PRE: 46 GUAGE POST: 46 CAL Y INTERCEPT: -0.75 CAL SLOPE: 30.77524

FLOW: UNITS: CFM PRE: 0: 0: 0: = 0: POST: 0: 0: 0: = 0

FLOW RATE: 8.6422 CFM VOLUME: 326.80105972 (CUBIC METERS)

RESULT UNITS: ug	ANALYTE NAME	RESULT	Q	CONCENTRATION	Q2
CONC. UNITS ug/cubic meter	Pentachlorophenol	0.2	U	0.0006	
	Benzo(a)anthracene	0.1		0.0003	
	Chrysene	0.5		0.0015	
	Benzo(b)fluoranthene	0.5		0.0015	
	Benzo(k)fluoranthene	0.2	J	0.0006	
	Benzo(a)pyrene	0.08		0.0002	
	Indeno(1,2,3-cd)pyrene	0.09		0.0003	
	Dibenzo(a,h)anthracene	0.03		0.0001	
	Benzo(g,h,i)perylene	0.1		0.0003	

Butto

SAMPLEID: ACC-B02-950304 LOCATION: 2 BATCH #: 9503S307 ☒ SAMPLE
 DUPLICATE OF ☐ START DATE: 3/4/95 END DATE: 3/5/95 ☐ DUPLICATE
 FILTER #: ☐ START TIME: 09:00 END TIME: 14:09 ☐ BLANK

CAL TYPE: ☒ PRESSURE ☐ FLOW ☒ ACTUAL FLOW ☐ STANDARD FLOW

PUMP / SAMPLER ID: 2 TEMP: 0 (° F) BAROMETRIC PRESS: 0 (inches)

METER UNITS: ☐ HOURS ☒ MINUTES METER TIME: 64693 to 66441 MINUTES

GUAGE PRE: 56 GUAGE POST: 59 CAL Y INTERCEPT: -1.92 CAL SLOPE: 35.76994

FLOW: UNITS: CFM PRE: 0 0 0 = 0 POST: 0 0 0 = 0

FLOW RATE: 9.3800 CFM VOLUME: 464.01598738 (CUBIC METERS)

RESULT UNITS: ug	ANALYTE NAME	RESULT	Q	CONCENTRATION	Q2
CONC. UNITS ug/cubic meter	Pentachlorophenol	1	J	0.0022	
	Benzo(a)anthracene	0.09		0.0002	
	Chrysene	0.4		0.0009	
	Benzo(b)fluoranthene	0.3		0.0006	
	Benzo(k)fluoranthene	0.1	J	0.0002	
	Benzo(a)pyrene	0.05		0.0001	
	Indeno(1,2,3-cd)pyrene	0.08		0.0002	
	Dibenzo(a,h)anthracene	0.02		0.0000	
	Benzo(g,h,i)perylene	0.1		0.0002	

Butto

SAMPID: ACC-B03-950304 LOCATION: 3 BATCH #: 9503S307
 DUPLICATE OF: START DATE: 3/4/95 END DATE: 3/5/95
 FILTER #: START TIME: 09:20 END TIME: 14:13

☒ SAMPLE
☐ DUPLICATE
☐ BLANK

CAL TYPE: ☒ PRESSURE ☐ FLOW ☒ ACTUAL FLOW ☐ STANDARD FLOW

PUMP / SAMPLER ID: 3 TEMP: 0 (° F) BAROMETRIC PRESS: 0 (Inches)

METER UNITS: ☐ HOURS ☒ MINUTES METER TIME: 62617 to 64350 MINUTES

GUAGE PRE: 55 GUAGE POST: 60 CAL Y INTERCEPT -0.49 CAL SLOPE 30.70878

FLOW: UNITS: CFM PRE: 0 0 0 = 0 POST: 0 0 0 = 0

FLOW RATE: 9.2781 CFM VOLUME: 455.03452881 (CUBIC METERS)

RESULT UNITS: ug
 CONC. UNITS: ug/cubic meter

ANALYTE NAME	RESULT	Q	CONCENTRATION	Q2
Pentachlorophenol	0.03	U	0.0001	
Benzo(a)anthracene	0.08		0.0002	
Chrysene	0.3		0.0007	
Benzo(b)fluoranthene	0.3		0.0007	
Benzo(k)fluoranthene	0.1	J	0.0002	
Benzo(a)pyrene	0.06		0.0001	
Indeno(1,2,3-cd)pyrene	0.08		0.0002	
Dibenzo(a,h)anthracene	0.02		0.0000	
Benzo(g,h,i)perylene	0.1		0.0002	

Butto

SAMPID: ACC-B01-950306 LOCATION: 1 BATCH #: 9503S307 ☒ SAMPLE
 DUPLICATE OF: ☐ START DATE: 3/6/95 END DATE: 3/7/95 ☐ DUPLICATE
 FILTER #: ☐ START TIME: 10:08 END TIME: 10:55 ☐ BLANK

CAL TYPE: ☒ PRESSURE ☐ FLOW ☒ ACTUAL FLOW ☐ STANDARD FLOW

PUMP / SAMPLER ID: 1 TEMP: 0 (° F) BAROMETRIC PRESS: 0 (Inches)

METER UNITS: ☐ HOURS ☒ MINUTES METER TIME: 75953 to 77439 MINUTES

GUAGE PRE: 60 GUAGE POST: 59 CAL Y INTERCEPT -0.62 CAL SLOPE 31.26772

FLOW: UNITS: CFM PRE 0: 0: 0 = 0: POST: 0 0 0 = 0

FLOW RATE: 9.4109 CFM VOLUME: 395.76479407 (CUBIC METERS)

RESULT UNITS: ug
 CONC. UNITS: ug/cubic meter

ANALYTE NAME	RESULT	Q	CONCENTRATION	Q2
Pentachlorophenol	0.5	U	0.0013	
Benzo(a)anthracene	0.4		0.0010	
Chrysene	0.6		0.0015	
Benzo(b)fluoranthene	0.5		0.0013	
Benzo(k)fluoranthene	0.4	J	0.0010	
Benzo(a)pyrene	0.4		0.0010	
Indeno(1,2,3-cd)pyrene	0.3		0.0008	
Dibenzo(a,h)anthracene	0.08		0.0002	
Benzo(g,h,i)perylene	0.4		0.0010	

Butto

SAMPID: ACC-B02-950306		LOCATION: 2		BATCH #: 9503S307		<input type="checkbox"/> SAMPLE <input checked="" type="checkbox"/> DUPLICATE <input type="checkbox"/> BLANK	
DUPLICATE OF:		START DATE: 3/6/95		END DATE: 3/7/95			
FILTER #:		START TIME: 10:14		END TIME: 10:47			
CAL TYPE: <input checked="" type="checkbox"/> PRESSURE <input type="checkbox"/> FLOW <input checked="" type="checkbox"/> ACTUAL FLOW <input type="checkbox"/> STANDARD FLOW							
PUMP / SAMPLER ID: 2		TEMP: 0 (° F)		BAROMETRIC PRESS: 0 (inches)			
METER UNITS: <input type="checkbox"/> HOURS <input checked="" type="checkbox"/> MINUTES		METER TIME: 66448 to 67921 MINUTES					
GUAGE PRE: 60		GUAGE POST: 59		CAL Y INTERCEPT: -1.92		CAL SLOPE: 35.76994	
FLOW: UNITS CFM		PRE 0 0 0 = 0		POST: 0 0 0 = 0			
FLOW RATE: 9.5097 CFM		VOLUME: 396.41980974 (CUBIC METERS)					

RESULT UNITS: ug	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">ANALYTE NAME</th> <th style="width: 10%;">RESULT</th> <th style="width: 10%;">Q</th> <th style="width: 20%;">CONCENTRATION</th> <th style="width: 10%;">Q2</th> </tr> </thead> <tbody> <tr><td>Pentachlorophenol</td><td>1</td><td>U</td><td>0.0025</td><td></td></tr> <tr><td>Benzo(a)anthracene</td><td>0.4</td><td></td><td>0.0010</td><td></td></tr> <tr><td>Chrysene</td><td>0.6</td><td></td><td>0.0015</td><td></td></tr> <tr><td>Benzo(b)fluoranthene</td><td>0.5</td><td></td><td>0.0013</td><td></td></tr> <tr><td>Benzo(k)fluoranthene</td><td>0.4</td><td>J</td><td>0.0010</td><td></td></tr> <tr><td>Benzo(a)pyrene</td><td>0.4</td><td></td><td>0.0010</td><td></td></tr> <tr><td>Indeno(1,2,3-cd)pyrene</td><td>0.3</td><td></td><td>0.0008</td><td></td></tr> <tr><td>Dibenzo(a,h)anthracene</td><td>0.08</td><td></td><td>0.0002</td><td></td></tr> <tr><td>Benzo(g,h,i)perylene</td><td>0.5</td><td></td><td>0.0013</td><td></td></tr> </tbody> </table>	ANALYTE NAME	RESULT	Q	CONCENTRATION	Q2	Pentachlorophenol	1	U	0.0025		Benzo(a)anthracene	0.4		0.0010		Chrysene	0.6		0.0015		Benzo(b)fluoranthene	0.5		0.0013		Benzo(k)fluoranthene	0.4	J	0.0010		Benzo(a)pyrene	0.4		0.0010		Indeno(1,2,3-cd)pyrene	0.3		0.0008		Dibenzo(a,h)anthracene	0.08		0.0002		Benzo(g,h,i)perylene	0.5		0.0013	
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Benzo(g,h,i)perylene	0.5		0.0013																																																
CONC. UNITS: ug/cubic meter																																																			

SAMPID: ACC-B03-950306 LOCATION: 3 BATCH #: 9503S307 ☒ SAMPLE
 DUPLICATE OF ☐ START DATE: 3/6/95 END DATE: 3/7/95 ☐ DUPLICATE
 FILTER # ☐ START TIME: 10:40 END TIME: 11:01 ☐ BLANK

CAL TYPE: ☒ PRESSURE ☐ FLOW ☒ ACTUAL FLOW ☐ STANDARD FLOW

PUMP / SAMPLER ID: 3 TEMP: 0 (° F) BAROMETRIC PRESS: 0 (inches)

METER UNITS: ☐ HOURS ☒ MINUTES METER TIME: 64350 to 65808 MINUTES

GUAGE PRE: 66 GUAGE POST: 68 CAL Y INTERCEPT: -0.49 CAL SLOPE: 30.70878

FLOW: UNITS: CFM PRE: 0 0 0 = 0 POST: 0 0 0 = 0

FLOW RATE: 9.9727 CFM VOLUME: 411.48570324 (CUBIC METERS)

RESULT UNITS: ug	ANALYTE NAME	RESULT	Q	CONCENTRATION	Q2
CONC. UNITS: ug/cubic meter	Pentachlorophenol	2	J	0.0049	
	Benzo(a)anthracene	0.3		0.0007	
	Chrysene	0.5		0.0012	
	Benzo(b)fluoranthene	0.5		0.0012	
	Benzo(k)fluoranthene	0.3	J	0.0007	
	Benzo(a)pyrene	0.4		0.0010	
	Indeno(1,2,3-cd)pyrene	0.2		0.0005	
	Dibenzo(a,h)anthracene	0.06		0.0001	
	Benzo(g,h,i)perylene	0.3		0.0007	

Butto

SAMPID: ACC-FB-950306		LOCATION: 3F		BATCH #: 9503S307		<input type="checkbox"/> SAMPLE <input type="checkbox"/> DUPLICATE <input checked="" type="checkbox"/> BLANK	
DUPLICATE OF:		START DATE: 3/6/95		END DATE: 3/7/95			
FILTER #:		START TIME:		END TIME:			
CAL TYPE: <input checked="" type="checkbox"/> PRESSURE <input type="checkbox"/> FLOW <input checked="" type="checkbox"/> ACTUAL FLOW <input type="checkbox"/> STANDARD FLOW							
PUMP / SAMPLER ID:		TEMP: 0 (° F)		BAROMETRIC PRESS: 0 (inches)			
METER UNITS: <input type="checkbox"/> HOURS <input checked="" type="checkbox"/> MINUTES		METER TIME: 0 to 0 MINUTES					
GUAGE PRE: 0		GUAGE POST: 0		CAL Y INTERCEPT: 0		CAL SLOPE: 0	
FLOW: UNITS: CFM		PRE: 0		0 = 0		POST: 0	
FLOW RATE: 0 CFM		VOLUME: 0 (CUBIC METERS)					

RESULT UNITS: ug CONC. UNITS: ug/cubic meter	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>ANALYTE NAME</th> <th>RESULT</th> <th>Q</th> <th>CONCENTRATION</th> <th>Q2</th> </tr> </thead> <tbody> <tr> <td>Pentachlorophenol</td> <td>0.2</td> <td>J</td> <td>1.0000</td> <td></td> </tr> <tr> <td>Benzo(a)anthracene</td> <td>0.01</td> <td>U</td> <td>0.0000</td> <td></td> </tr> <tr> <td>Chrysene</td> <td>0.01</td> <td>U</td> <td>0.0000</td> <td></td> </tr> <tr> <td>Benzo(b)fluoranthene</td> <td>0.01</td> <td>U</td> <td>0.0000</td> <td></td> </tr> <tr> <td>Benzo(k)fluoranthene</td> <td>0.01</td> <td>U</td> <td>0.0000</td> <td></td> </tr> <tr> <td>Benzo(a)pyrene</td> <td>0.01</td> <td>U</td> <td>0.0000</td> <td></td> </tr> <tr> <td>Indeno(1,2,3-cd)pyrene</td> <td>0.01</td> <td>U</td> <td>0.0000</td> <td></td> </tr> <tr> <td>Dibenzo(a,h)anthracene</td> <td>0.01</td> <td>U</td> <td>0.0000</td> <td></td> </tr> <tr> <td>Benzo(g,h,i)perylene</td> <td>0.01</td> <td>U</td> <td>0.0000</td> <td></td> </tr> </tbody> </table>	ANALYTE NAME	RESULT	Q	CONCENTRATION	Q2	Pentachlorophenol	0.2	J	1.0000		Benzo(a)anthracene	0.01	U	0.0000		Chrysene	0.01	U	0.0000		Benzo(b)fluoranthene	0.01	U	0.0000		Benzo(k)fluoranthene	0.01	U	0.0000		Benzo(a)pyrene	0.01	U	0.0000		Indeno(1,2,3-cd)pyrene	0.01	U	0.0000		Dibenzo(a,h)anthracene	0.01	U	0.0000		Benzo(g,h,i)perylene	0.01	U	0.0000	
ANALYTE NAME	RESULT	Q	CONCENTRATION	Q2																																															
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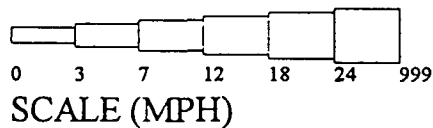
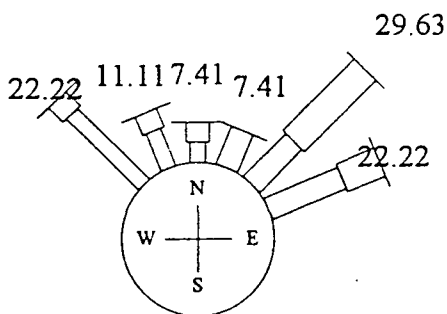
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DUPLICATE OF:		START DATE: 3/6/95		END DATE: 3/7/95			
FILTER #:		START TIME:		END TIME:			
CAL TYPE: <input checked="" type="checkbox"/> PRESSURE <input type="checkbox"/> FLOW <input checked="" type="checkbox"/> ACTUAL FLOW <input type="checkbox"/> STANDARD FLOW							
PUMP / SAMPLER ID:		TEMP: 0 (° F)		BAROMETRIC PRESS: 0 (inches)			
METER UNITS: <input checked="" type="checkbox"/> HOURS <input type="checkbox"/> MINUTES		METER TIME: 0 to 0 HOURS					
GUAGE PRE: 0		GUAGE POST: 0		CAL Y INTERCEPT: 0		CAL SLOPE: 0	
FLOW: UNITS: CFM		PRE: 0 0 0		= 0		POST: 0 0 0 = 0	
FLOW RATE: 0 CFM		VOLUME: 0 (CUBIC METERS)					

RESULT UNITS: ug CONC. UNITS: ug/SAMPLE	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>ANALYTE NAME</th> <th>RESULT</th> <th>Q</th> <th>CONCENTRATION</th> <th>Q2</th> </tr> </thead> <tbody> <tr><td>Pentachlorophenol</td><td>0.02</td><td>U</td><td>0.0000</td><td></td></tr> <tr><td>Benzo(a)anthracene</td><td>0.01</td><td>U</td><td>0.0000</td><td></td></tr> <tr><td>Chrysene</td><td>0.01</td><td>U</td><td>0.0000</td><td></td></tr> <tr><td>Benzo(b)fluoranthene</td><td>0.01</td><td>U</td><td>0.0000</td><td></td></tr> <tr><td>Benzo(k)fluoranthene</td><td>0.01</td><td>U</td><td>0.0000</td><td></td></tr> <tr><td>Benzo(a)pyrene</td><td>0.01</td><td>U</td><td>0.0000</td><td></td></tr> <tr><td>Indeno(1,2,3-cd)pyrene</td><td>0.01</td><td>U</td><td>0.0000</td><td></td></tr> <tr><td>Dibenzo(a,h)anthracene</td><td>0.01</td><td>U</td><td>0.0000</td><td></td></tr> <tr><td>Benzo(g,h,i)perylene</td><td>0.01</td><td>U</td><td>0.0000</td><td></td></tr> </tbody> </table>	ANALYTE NAME	RESULT	Q	CONCENTRATION	Q2	Pentachlorophenol	0.02	U	0.0000		Benzo(a)anthracene	0.01	U	0.0000		Chrysene	0.01	U	0.0000		Benzo(b)fluoranthene	0.01	U	0.0000		Benzo(k)fluoranthene	0.01	U	0.0000		Benzo(a)pyrene	0.01	U	0.0000		Indeno(1,2,3-cd)pyrene	0.01	U	0.0000		Dibenzo(a,h)anthracene	0.01	U	0.0000		Benzo(g,h,i)perylene	0.01	U	0.0000	
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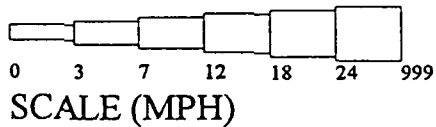
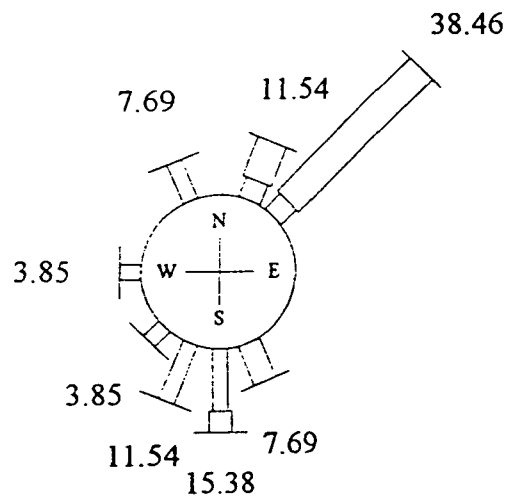
APPENDIX C
WIND ROSE DIAGRAMS

EPA ACC SITE
CHEHALIS, WASHINGTON
MARCH 1, 1995 - MARCH 2, 1995 SAMPLING EVENT
CALMS EXCLUDED



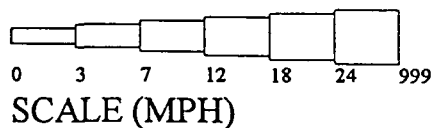
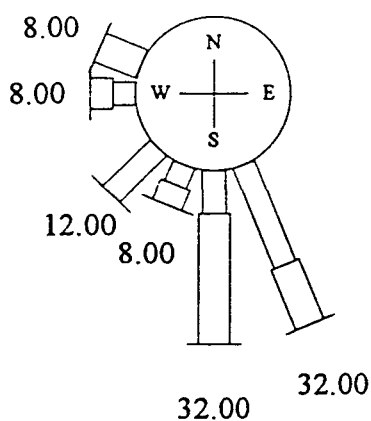
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	0-3	3-7	7-12	12-18	18-24	>24		0-3	3-7	7-12	12-18	18-24	>24
N	3.70	3.70	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00
NNE	0.00	7.41	0.00	0.00	0.00	0.00	SSW	0.00	0.00	0.00	0.00	0.00	0.00
NE	0.00	11.11	18.52	0.00	0.00	0.00	SW	0.00	0.00	0.00	0.00	0.00	0.00
ENE	0.00	14.81	7.41	0.00	0.00	0.00	WSW	0.00	0.00	0.00	0.00	0.00	0.00
E	0.00	0.00	0.00	0.00	0.00	0.00	W	0.00	0.00	0.00	0.00	0.00	0.00
ESE	0.00	0.00	0.00	0.00	0.00	0.00	WNW	0.00	0.00	0.00	0.00	0.00	0.00
SE	0.00	0.00	0.00	0.00	0.00	0.00	NW	18.52	3.70	0.00	0.00	0.00	0.00
SSE	0.00	0.00	0.00	0.00	0.00	0.00	NNW	7.41	3.70	0.00	0.00	0.00	0.00

EPA ACC SITE
CHEHALIS, WASHINGTON
MARCH 2, 1995 - MARCH 3, 1995 SAMPLING EVENT
CALMS EXCLUDED



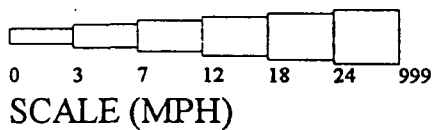
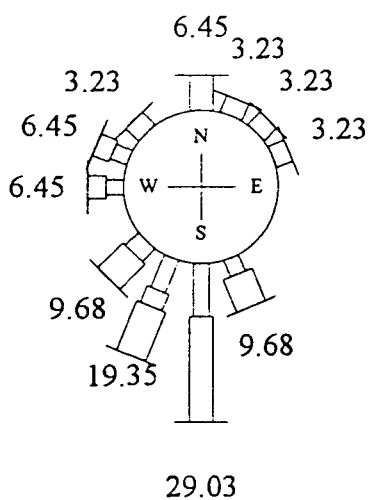
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	0-3	3-7	7-12	12-18	18-24	>24		0-3	3-7	7-12	12-18	18-24	>24
N	0.00	0.00	0.00	0.00	0.00	0.00	S	11.54	3.85	0.00	0.00	0.00	0.00
NNE	0.00	3.85	7.69	0.00	0.00	0.00	SSW	11.54	0.00	0.00	0.00	0.00	0.00
NE	0.00	3.85	34.62	0.00	0.00	0.00	SW	3.85	0.00	0.00	0.00	0.00	0.00
ENE	0.00	0.00	0.00	0.00	0.00	0.00	WSW	0.00	0.00	0.00	0.00	0.00	0.00
E	0.00	0.00	0.00	0.00	0.00	0.00	W	3.85	0.00	0.00	0.00	0.00	0.00
ESE	0.00	0.00	0.00	0.00	0.00	0.00	WNW	0.00	0.00	0.00	0.00	0.00	0.00
SE	0.00	0.00	0.00	0.00	0.00	0.00	NW	0.00	0.00	0.00	0.00	0.00	0.00
SSE	0.00	7.69	0.00	0.00	0.00	0.00	NNW	7.69	0.00	0.00	0.00	0.00	0.00

EPA ACC SITE
CHEHALIS, WASHINGTON
MARCH 3, 1995 - MARCH 4, 1995 SAMPLING EVENT
CALMS EXCLUDED



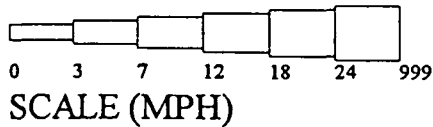
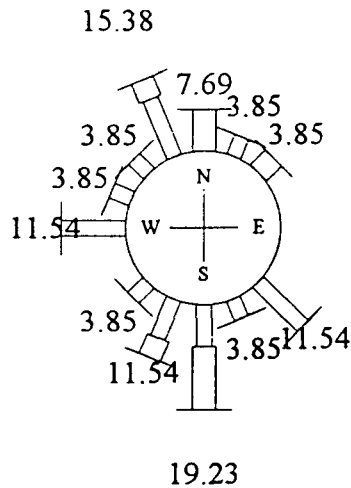
WIND SPEED (MPH) PERCENT OCCURRENCE							WIND SPEED (MPH) PERCENT OCCURRENCE						
	0-3	3-7	7-12	12-18	18-24	>24		0-3	3-7	7-12	12-18	18-24	>24
N	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	8.00	24.00	0.00	0.00	0.00
NNE	0.00	0.00	0.00	0.00	0.00	0.00	SSW	0.00	4.00	4.00	0.00	0.00	0.00
NE	0.00	0.00	0.00	0.00	0.00	0.00	SW	0.00	12.00	0.00	0.00	0.00	0.00
ENE	0.00	0.00	0.00	0.00	0.00	0.00	WSW	0.00	0.00	0.00	0.00	0.00	0.00
E	0.00	0.00	0.00	0.00	0.00	0.00	W	0.00	4.00	4.00	0.00	0.00	0.00
ESE	0.00	0.00	0.00	0.00	0.00	0.00	WNW	0.00	0.00	8.00	0.00	0.00	0.00
SE	0.00	0.00	0.00	0.00	0.00	0.00	NW	0.00	0.00	0.00	0.00	0.00	0.00
SSE	0.00	20.00	12.00	0.00	0.00	0.00	NNW	0.00	0.00	0.00	0.00	0.00	0.00

EPA ACC SITE
CHEHALIS, WASHINGTON
MARCH 4, 1995 - MARCH 5, 1995 SAMPLING EVENT
CALMS EXCLUDED



WIND SPEED (MPH) PERCENT OCCURRENCE							WIND SPEED (MPH) PERCENT OCCURRENCE						
	0-3	3-7	7-12	12-18	18-24	>24		0-3	3-7	7-12	12-18	18-24	>24
N	0.00	6.45	0.00	0.00	0.00	0.00	S	9.68	19.35	0.00	0.00	0.00	0.00
NNE	0.00	3.23	0.00	0.00	0.00	0.00	SSW	6.45	3.23	9.68	0.00	0.00	0.00
NE	0.00	3.23	0.00	0.00	0.00	0.00	SW	0.00	3.23	6.45	0.00	0.00	0.00
ENE	0.00	3.23	0.00	0.00	0.00	0.00	WSW	0.00	0.00	0.00	0.00	0.00	0.00
E	0.00	0.00	0.00	0.00	0.00	0.00	W	3.23	3.23	0.00	0.00	0.00	0.00
ESE	0.00	0.00	0.00	0.00	0.00	0.00	WNW	3.23	3.23	0.00	0.00	0.00	0.00
SE	0.00	0.00	0.00	0.00	0.00	0.00	NW	0.00	3.23	0.00	0.00	0.00	0.00
SSE	3.23	0.00	6.45	0.00	0.00	0.00	NNW	0.00	0.00	0.00	0.00	0.00	0.00

EPA ACC SITE
CHEHALIS, WASHINGTON
MARCH 6, 1995 - MARCH 7, 1995 SAMPLING EVENT
CALMS EXCLUDED



	WIND SPEED (MPH) PERCENT OCCURRENCE						WIND SPEED (MPH) PERCENT OCCURRENCE					
	0-3	3-7	7-12	12-18	18-24	>24	0-3	3-7	7-12	12-18	18-24	>24
N	0.00	7.69	0.00	0.00	0.00	0.00	S	7.69	11.54	0.00	0.00	0.00
NNE	3.85	0.00	0.00	0.00	0.00	0.00	SSW	7.69	3.85	0.00	0.00	0.00
NE	0.00	3.85	0.00	0.00	0.00	0.00	SW	3.85	0.00	0.00	0.00	0.00
ENE	0.00	0.00	0.00	0.00	0.00	0.00	WSW	0.00	0.00	0.00	0.00	0.00
E	0.00	0.00	0.00	0.00	0.00	0.00	W	11.54	0.00	0.00	0.00	0.00
ESE	0.00	0.00	0.00	0.00	0.00	0.00	WNW	3.85	0.00	0.00	0.00	0.00
SE	11.54	0.00	0.00	0.00	0.00	0.00	NW	3.85	0.00	0.00	0.00	0.00
SSE	3.85	0.00	0.00	0.00	0.00	0.00	NNW	11.54	3.85	0.00	0.00	0.00

APPENDIX D
DATA VALIDATION



Roy F. Weston, Inc.
Gateway Tower, 57th Floor, Suite 5700
700 5th Avenue
Seattle, Washington 98104-5057
206-521-7600 • Fax 206-521-7601

MEMORANDUM

DATE: 5 May 1995

TO: Lee Marshall, WAM, U.S. EPA, Region X

FROM: Jennifer M. Baier, Environmental Chemist, WESTON, Seattle
Roger McGinnis, Senior Environmental Chemist, WESTON, Seattle

SUBJECT: Project: American Crossarm and Conduit
SDG No.: 9503S307
Task: Data Validation
Analysis: Polynuclear Aromatic Hydrocarbons and
Pentachlorophenol by Selective Ion Monitoring (SIM)

WORK ASSIGNMENT NO.: 46-36-0R91

DOC. CONTROL NO.: 04000-030-001-AAHR

WORK ORDER NO.: 04000-030-001-3500-01

cc: Peter Rubenstein, RAP WAM, U.S. EPA, Region X
Bruce Woods, TPO, U.S. EPA, Region X
Brian Brass, Task Manager, WESTON, Seattle
Brady White, Task Coordinator, WESTON, Seattle

The quality assurance review of 11 samples, SDG 9503S307, collected from American Crossarm and Conduit has been completed. The air PUFs samples were analyzed at low level for polynuclear aromatic hydrocarbons and pentachlorophenol by WESTON—Stockton, Stockton, CA.

Data Qualifications

The following comments refer to the laboratory performance in meeting the Quality Control Specifications outlined in the analytical request technical specifications.



Project: American Crossarm and Conduit
SDG No.: 9503S307
Page 2

1. Holding Times

Acceptable, all samples were analyzed within holding times.

2. Tuning and Mass Calibration

Acceptable, instrument tuning results were within the acceptable QC limits.

3. Initial Calibration

Initial calibrations were within the QC limit of less than 30 percent relative standard difference (%RSD) with the exception of the following:

Initial Calibration	Analyte	%RSD	Affected Samples
3/24/95	Pentachlorophenol	68.6	ACC-B01-950306
3/30/95	Pentachlorophenol	36.3	None

Sample ACC-B01-950306 pentachlorophenol result was qualified as estimated (J).

4. Continuing Calibration

All continuing calibration percent differences were within the QC limit of less than or equal to 25%, with the exception of pentachlorophenol (48.9%) for the continuing calibration run on 3/20/95 at 11:26am. The sample associated with this date was ACC-B02-950306 and the pentachlorophenol result was qualified as estimated (J).

5. Internal Standards

Acceptable, samples had internal standard (IS) areas within the QC range.

6. Blanks

a. Method Blanks

Acceptable, no analytes were detected in the method blank.



Project: American Crossarm and Conduit

SDG No.: 9503S307

Page 3

b. Field Blank

Pentachlorophenol was detected in the field blank at a concentration of 0.2 total µg. Samples were qualified as undetected due to blank contamination(UB) if the sample's detected concentration was less than or equal to 5 times the blank concentration.

c. Trip Blank

Acceptable, no analytes were detected in the trip blank.

7. Surrogate Recovery

Acceptable, all surrogate recoveries were within the QC limits of 18-137%.

8. Spike Blank

The spike blank percent recoveries for the analytes were within QC limits of 30-140% with the exception of the following:

Analyte	LCS	LCSD
Pentachlorophenol	1%	6%

Also, the relative percent differences for the analytes were within the acceptable QC limits of 0 - 50 percent, with the exception of the following:

Analyte	Relative Percent Difference
Pentachlorophenol	166%
Benzo(k)fluoranthene	53%

Pentachlorophenol results were qualified as estimated (J or UJ) and detected benzo(k)fluoranthene results were qualified as estimated (J).



Project: American Crossarm and Conduit
SDG No.: 9503S307
Page 4

9. Field Duplicate

Samples ACC-B03-950303 and ACC-B3D-950303 were field duplicates. The relative percent differences (RPDs) were within the QC limit of less than 50% for all analytes.

Data Assessment

Upon consideration of the data qualifications noted above, the data are ACCEPTABLE for use except where flagged with data qualifiers that modify the usefulness of the individual values.

Data Qualifiers

- U - The compound was analyzed for, but was not detected.
- UJ - The compound was analyzed for, but was not detected. The associated quantitation limit is an estimate because quality control criteria were not met.
- J - The analyte was positively identified, but the associated numerical value is an estimated quantity because quality control criteria were not met or because concentrations reported are less than CRDL or lowest calibration standard.
- R - Quality control indicates that data are unusable (compound may or may not be present). Resampling and reanalysis are necessary for verification.
- N - Presumptive evidence of presence of material (tentative identification).

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

ACC-B01-950303

Lab Name: ROY F. WESTON, INC. Work Order: 04000-027-001-2

Client: EPA - SEATTLE

Matrix: AIR

Lab Sample ID: 9503S307-001

Sample wt/vol: (g/mL)

Lab File ID: FFQM13

Level: (low/med) LOW

Date Received: 03/09/95

% Moisture: not dec. dec.

Date Extracted: 03/09/95

Extraction: (SepF/Cont/Sonc)

Date Analyzed: 03/16/95

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.00

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) total ug

87-86-5-----	Pentachlorophenol	0.8	0.85
56-55-3-----	Benzo(a)anthracene	0.1	
218-01-9-----	Chrysene	0.4	
205-99-2-----	Benzo(b)fluoranthene	0.4	
207-08-9-----	Benzo(k)fluoranthene	0.2	5
50-32-8-----	Benzo(a)pyrene	0.09	
193-39-5-----	Indeno(1,2,3-cd)pyrene	0.09	
53-70-3-----	Dibenz(a,h)anthracene	0.03	
191-24-2-----	Benzo(g,h,i)perylene	0.1	

FORM 1 SV-1

12/88 Rev.

J.M.B.
2/2/95

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

ACC-B02-950303

Lab Name: ROY F. WESTON, INC. Work Order: 04000-027-001-2

Client: EPA - SEATTLE

Matrix: AIR

Lab Sample ID: 9503S307-002

Sample wt/vol: (g/mL)

Lab File ID: FFQM14

Level: (low/med) LOW

Date Received: 03/09/95

% Moisture: not dec. dec.

Date Extracted: 03/09/95

Extraction: (SepF/Cont/Sonc)

Date Analyzed: 03/16/95

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.00

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) total ug

87-86-5-----	Pentachlorophenol	3	5
56-55-3-----	Benzo(a)anthracene	0.2	
218-01-9-----	Chrysene	0.6	
205-99-2-----	Benzo(b)fluoranthene	0.6	
207-08-9-----	Benzo(k)fluoranthene	0.2	5
50-32-8-----	Benzo(a)pyrene	0.09	
193-39-5-----	Indeno(1,2,3-cd)pyrene	0.1	
53-70-3-----	Dibenz(a,h)anthracene	0.03	
191-24-2-----	Benzo(g,h,i)perylene	0.1	

FORM 1 SV-1

12/88 Rev.

J.M.B.
4/13/95

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

ACC-B03-950303

Lab Name: ROY F. WESTON, INC. Work Order: 04000-027-001-2

Client: EPA - SEATTLE

Matrix: AIR

Lab Sample ID: 9503S307-003

Sample wt/vol: (g/mL)

Lab File ID: FFQM15

Level: (low/med) LOW

Date Received: 03/09/95

% Moisture: not dec. dec.

Date Extracted: 03/09/95

Extraction: (SepF/Cont/Sonc)

Date Analyzed: 03/16/95

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.00

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) total ug

87-86-5-----	Pentachlorophenol	0.01	5
56-55-3-----	Benzo(a)anthracene	0.1	
218-01-9-----	Chrysene	0.5	
205-99-2-----	Benzo(b)fluoranthene	0.5	
207-08-9-----	Benzo(k)fluoranthene	0.2	
50-32-8-----	Benzo(a)pyrene	0.09	
193-39-5-----	Indeno(1,2,3-cd)pyrene	0.09	
53-70-3-----	Dibenz(a,h)anthracene	0.03	
191-24-2-----	Benzo(g,h,i)perylene	0.1	

FORM 1 SV-1

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4/12/95

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

Lab Name: ROY F. WESTON, INC. Work Order: 04000-027-001-2

ACC-B3D-950303

Client: EPA - SEATTLE

Matrix: AIR

Lab Sample ID: 9503S307-004

Sample wt/vol: (g/mL)

Lab File ID: FFQM16

Level: (low/med) LOW

Date Received: 03/09/95

% Moisture: not dec. dec.

Date Extracted: 03/09/95

Extraction: (SepF/Cont/Sonc)

Date Analyzed: 03/16/95

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>total ug</u>
---------	----------	---

87-86-5-----	Pentachlorophenol	0.2	<div>415 J</div> <div>5 23</div>
56-55-3-----	Benzo(a)anthracene	0.1	
218-01-9-----	Chrysene	0.5	
205-99-2-----	Benzo(b)fluoranthene	0.5	
207-08-9-----	Benzo(k)fluoranthene	0.2	
50-32-8-----	Benzo(a)pyrene	0.08	
193-39-5-----	Indeno(1,2,3-cd)pyrene	0.09	
53-70-3-----	Dibenz(a,h)anthracene	0.03	
191-24-2-----	Benzo(g,h,i)perylene	0.1	

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4/12/95

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

ACC-B02-950304

Lab Name: ROY F. WESTON, INC. Work Order: 04000-027-001-2

Client: EPA - SEATTLE

Matrix: AIR

Lab Sample ID: 9503S307-006

Sample wt/vol: (g/mL)

Lab File ID: FFQM18

Level: (low/med) LOW

Date Received: 03/09/95

% Moisture: not dec. dec.

Date Extracted: 03/09/95

Extraction: (SepF/Cont/Sonc)

Date Analyzed: 03/16/95

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.00

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) total ug

87-86-5-----	Pentachlorophenol	1	0.35
56-55-3-----	Benzo(a)anthracene	0.09	
218-01-9-----	Chrysene	0.4	
205-99-2-----	Benzo(b)fluoranthene	0.3	
207-08-9-----	Benzo(k)fluoranthene	0.1	5
50-32-8-----	Benzo(a)pyrene	0.05	
193-39-5-----	Indeno(1,2,3-cd)pyrene	0.08	
53-70-3-----	Dibenz(a,h)anthracene	0.02	
191-24-2-----	Benzo(g,h,i)perylene	0.1	

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1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

Lab Name: ROY F. WESTON, INC. Work Order: 04000-027-001-2

ACC-B03-950304

Client: EPA - SEATTLE

Matrix: AIR

Lab Sample ID: 9503S307-007

Sample wt/vol: (g/mL)

Lab File ID: FFQM19

Level: (low/med) LOW

Date Received: 03/09/95

% Moisture: not dec. dec.

Date Extracted: 03/09/95

Extraction: (SepF/Cont/Sonc)

Date Analyzed: 03/16/95

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>total ug</u>
---------	----------	---

87-86-5-----	Pentachlorophenol	0.03	JF5
56-55-3-----	Benzo(a)anthracene	0.08	
218-01-9-----	Chrysene	0.3	
205-99-2-----	Benzo(b)fluoranthene	0.3	
207-08-9-----	Benzo(k)fluoranthene	0.1	5
50-32-8-----	Benzo(a)pyrene	0.06	
193-39-5-----	Indeno(1,2,3-cd)pyrene	0.08	
53-70-3-----	Dibenz(a,h)anthracene	0.02	
191-24-2-----	Benzo(g,h,i)perylene	0.1	

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1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

ACC-B01-950306

Lab Name: ROY F. WESTON, INC. Work Order: 04000-027-001-2

Client: EPA - SEATTLE

Matrix: AIR

Lab Sample ID: 9503S307-008

Sample wt/vol: _____ (g/mL) _____

Lab File ID: FFQU11

Level: (low/med) LOW

Date Received: 03/09/95

% Moisture: not dec. _____ dec. _____

Date Extracted: 03/09/95

Extraction: (SepF/Cont/Sonc) _____

Date Analyzed: 03/24/95

GPC Cleanup: (Y/N) N pH: _____

Dilution Factor: 1.00

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) total ug

87-86-5-----	Pentachlorophenol	0.5	0.5
56-55-3-----	Benzo(a)anthracene	0.4	
218-01-9-----	Chrysene	0.6	
205-99-2-----	Benzo(b)fluoranthene	0.5	
207-08-9-----	Benzo(k)fluoranthene	0.4	5
50-32-8-----	Benzo(a)pyrene	0.4	
193-39-5-----	Indeno(1,2,3-cd)pyrene	0.3	
53-70-3-----	Dibenz(a,h)anthracene	0.08	
191-24-2-----	Benzo(g,h,i)perylene	0.4	

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1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

Lab Name: ROY F. WESTON, INC. Work Order: 04000-027-001-2

ACC-B02-950306

Client: EPA - SEATTLE

Matrix: AIR

Lab Sample ID: 9503S307-009

Sample wt/vol: (g/mL)

Lab File ID: FF0015

Level: (low/med) LOW

Date Received: 03/09/95

% Moisture: not dec. dec.

Date Extracted: 03/09/95

Extraction: (SepF/Cont/Sonc)

Date Analyzed: 03/20/95

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.00

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) total ug

87-86-5-----	Pentachlorophenol	1	105
56-55-3-----	Benzo(a)anthracene	0.4	
218-01-9-----	Chrysene	0.6	
205-99-2-----	Benzo(b)fluoranthene	0.5	
207-08-9-----	Benzo(k)fluoranthene	0.4	5
50-32-8-----	Benzo(a)pyrene	0.4	
193-39-5-----	Indeno(1,2,3-cd)pyrene	0.3	
53-70-3-----	Dibenz(a,h)anthracene	0.08	
191-24-2-----	Benzo(g,h,i)perylene	0.5	

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1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

ACC-B03-950306

Lab Name: ROY F. WESTON, INC. Work Order: 04000-027-001-2

Client: EPA - SEATTLE

Matrix: AIR

Lab Sample ID: 9503S307-010

Sample wt/vol: _____ (g/mL) _____

Lab File ID: FFQR12

Level: (low/med) LOW

Date Received: 03/09/95

% Moisture: not dec. _____ dec. _____

Date Extracted: 03/09/95

Extraction: (SepF/Cont/Sonc) _____

Date Analyzed: 03/21/95

GPC Cleanup: (Y/N) N pH: _____

Dilution Factor: 1.00

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) total ug

87-86-5-----	Pentachlorophenol	2	5
56-55-3-----	Benzo(a)anthracene	0.3	
218-01-9-----	Chrysene	0.5	
205-99-2-----	Benzo(b)fluoranthene	0.5	
207-08-9-----	Benzo(k)fluoranthene	0.3	5
50-32-8-----	Benzo(a)pyrene	0.4	
193-39-5-----	Indeno(1,2,3-cd)pyrene	0.2	
53-70-3-----	Dibenz(a,h)anthracene	0.06	
191-24-2-----	Benzo(g,h,i)perylene	0.3	

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4/13/95

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

Lab Name: ROY F. WESTON, INC. Work Order: 04000-027-001-2

ACC-FB-950306

Client: EPA - SEATTLE

Matrix: AIR

Lab Sample ID: 9503S307-011

Sample wt/vol: (g/mL)

Lab File ID: FFQR04

Level: (low/med) LOW

Date Received: 03/09/95

% Moisture: not dec. dec.

Date Extracted: 03/09/95

Extraction: (SepF/Cont/Sonc)

Date Analyzed: 03/21/95

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.00

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) total ug

87-86-5-----	Pentachlorophenol	0.2	5
56-55-3-----	Benzo(a)anthracene	0.01	U
218-01-9-----	Chrysene	0.01	U
205-99-2-----	Benzo(b)fluoranthene	0.01	U
207-08-9-----	Benzo(k)fluoranthene	0.01	U
50-32-8-----	Benzo(a)pyrene	0.01	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	0.01	U
53-70-3-----	Dibenz(a,h)anthracene	0.01	U
191-24-2-----	Benzo(g,h,i)perylene	0.01	U

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1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

ACC-TB-950306

Lab Name: ROY F. WESTON, INC. Work Order: 04000-027-001-2

Client: EPA - SEATTLE

Matrix: AIR

Lab Sample ID: 9503S307-012

Sample wt/vol: (g/mL)

Lab File ID: FFQR14

Level: (low/med) LOW

Date Received: 03/09/95

% Moisture: not dec. dec.

Date Extracted: 03/09/95

Extraction: (SepF/Cont/Sonc)

Date Analyzed: 03/21/95

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>total ug</u>
---------	----------	---

87-86-5-----	Pentachlorophenol	0.02	U
56-55-3-----	Benzo(a)anthracene	0.01	U
218-01-9-----	Chrysene	0.01	U
205-99-2-----	Benzo(b)fluoranthene	0.01	U
207-08-9-----	Benzo(k)fluoranthene	0.01	U
50-32-8-----	Benzo(a)pyrene	0.01	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	0.01	U
53-70-3-----	Dibenz(a,h)anthracene	0.01	U
191-24-2-----	Benzo(g,h,i)perylene	0.01	U

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Roy F. Weston, Inc.
Gateway Tower, 57th Floor, Suite 5700
700 5th Avenue
Seattle, Washington 98104-5057
206-521-7600 • Fax 206-521-7601

MEMORANDUM

DATE: 5 May 1995

TO: Lee Marshall, WAM, U.S. EPA, Region X

FROM: Jennifer M. Baier, Environmental Chemist, WESTON, Seattle
Roger McGinnis, Senior Environmental Chemist, WESTON, Seattle

SUBJECT: Project: American Crossarm and Conduit
SDG No.: 9503S301
Task: Data Validation
Analysis: Polynuclear Aromatic Hydrocarbons and
Pentachlorophenol by Selective Ion Monitoring (SIM)

WORK ASSIGNMENT NO.: 46-36-0R91

DOC. CONTROL NO.: 04000-030-001-AAHQ

WORK ORDER NO.: 04000-030-001-3500-01

cc: Peter Rubenstein, RAP WAM, U.S. EPA, Region X
Bruce Woods, TPO, U.S. EPA, Region X
Brian Brass, Task Manager, WESTON, Seattle
Brady White, Task Coordinator, WESTON, Seattle

The quality assurance review of 6 samples, SDG 9503S301, collected from American Crossarm and Conduit has been completed. The air PUF samples were analyzed at low level for polynuclear aromatic hydrocarbons and pentachlorophenol by WESTON—Stockton, Stockton, CA.

Data Qualifications

The following comments refer to the laboratory performance in meeting the Quality Control Specifications outlined in the analytical request technical specifications.





Project: American Crossarm and Conduit
SDG No.: 9503S301
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1. Holding Times

Acceptable, all samples were analyzed within holding times.

2. Tuning and Mass Calibration

Acceptable, instrument tuning results were within the acceptable QC limits.

3. Initial Calibration

Acceptable, initial calibrations were within the QC limit of less than 30 percent relative standard difference (%RSD).

4. Continuing Calibration

Acceptable, all continuing calibration percent differences were within the QC limit of less than or equal to 25%.

5. Internal Standards

Samples had internal standard (IS) areas within the QC range with exception of the following:

Internal Standard	Date	Sample Affected	Sample IS Area	IS Area Range
Perylene-d12	3/14/95	ACC-B02-950302	238194	953580-238395

Detected concentrations for benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benzo(g,h,i)perylene, and dibenzo(a,h)anthracene in sample ACC-B02-950302 were qualified as estimated (J).



Project: American Crossarm and Conduit

SDG No.: 9503S301

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6. Blanks

a. Method Blanks

Acceptable, no analytes were detected in the method blank.

b. Field Blank

No field blanks were associated with this data delivery group.

c. Trip Blank

No trip blanks were associated with this data delivery group.

7. Surrogate Recovery

Acceptable, all surrogate recoveries were within the QC limits of 18-137%.

8. Spike Blank

The spike blank percent recoveries for the analytes were within QC limits of 30-140% with the exception of the following:

Analyte	LCSD
Pentachlorophenol	8%

Also, the relative percent differences for the analytes were within the acceptable QC limits of 0 - 50 percent, with the exception of the following:

Analyte	Relative Percent Difference
Pentachlorophenol	115%

Samples were qualified as estimated (J or UJ) for pentachlorophenol.



Project: American Crossarm and Conduit
SDG No.: 9503S301
Page 4

9. Field Duplicate

No field duplicate samples were associated with this sample delivery group.

Data Assessment

Upon consideration of the data qualifications noted above, the data are ACCEPTABLE for use except where flagged with data qualifiers that modify the usefulness of the individual values.

Data Qualifiers

- U - The compound was analyzed for, but was not detected.
- UJ - The compound was analyzed for, but was not detected. The associated quantitation limit is an estimate because quality control criteria were not met.
- J - The analyte was positively identified, but the associated numerical value is an estimated quantity because quality control criteria were not met or because concentrations reported are less than CRDL or lowest calibration standard.
- R - Quality control indicates that data are unusable (compound may or may not be present). Resampling and reanalysis are necessary for verification.
- N - *Presumptive evidence of presence of material (tentative identification).*

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

ACC-801-950301

Lab Name: ROY F. WESTON, INC. Work Order: 04000-027-001-2

Client: EPA - SEATTLE

Matrix: AIR

Lab Sample ID: 9503S290-001

Sample wt/vol: (g/mL)

Lab File ID: .0FFQK14

Level: (low/med) LOW

Date Received: 03/06/95

% Moisture: not dec. dec.

Date Extracted: 03/08/95

Extraction: (SepF/Cont/Sonc)

Date Analyzed: 03/15/95

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.00

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) total ug

87-86-5-----	Pentachlorophenol	0.09	5
56-55-3-----	Benzo(a)anthracene	0.2	
218-01-9-----	Chrysene	0.4	
205-99-2-----	Benzo(b)fluoranthene	0.3	
207-08-9-----	Benzo(k)fluoranthene	0.3	
50-32-8-----	Benzo(a)pyrene	0.3	
193-39-5-----	Indeno(1,2,3-cd)pyrene	0.2	
53-70-3-----	Dibenz(a,h)anthracene	0.07	
191-24-2-----	Benzo(g,h,i)perylene	0.4	

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4/13/95

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

ACC-B02-950301

Lab Name: ROY F. WESTON, INC. Work Order: 04000-027-001-2

Client: EPA - SEATTLE

Matrix: AIR

Lab Sample ID: 9503S290-002

Sample wt/vol: (g/mL)

Lab File ID: .OFFQK15

Level: (low/med) LOW

Date Received: 03/06/95

% Moisture: not dec. dec.

Date Extracted: 03/08/95

Extraction: (SepF/Cont/Sonc)

Date Analyzed: 03/15/95

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>total ug</u>
---------	----------	---

87-86-5-----	Pentachlorophenol	1	5
56-55-3-----	Benzo(a)anthracene	0.3	
218-01-9-----	Chrysene	0.5	
205-99-2-----	Benzo(b)fluoranthene	0.4	
207-08-9-----	Benzo(k)fluoranthene	0.4	
50-32-8-----	Benzo(a)pyrene	0.3	
193-39-5-----	Indeno(1,2,3-cd)pyrene	0.2	
53-70-3-----	Dibenz(a,h)anthracene	0.06	
191-24-2-----	Benzo(g,h,i)perylene	0.6	

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4/15/95

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

ACC-B03-950301

Lab Name: ROY F. WESTON, INC. Work Order: 04000-027-001-2

Client: EPA - SEATTLE

Matrix: AIR

Lab Sample ID: 9503S290-003

Sample wt/vol: _____ (g/mL) _____

Lab File ID: .OFFQK16

Level: (low/med) LOW

Date Received: 03/06/95

% Moisture: not dec. _____ dec. _____

Date Extracted: 03/08/95

Extraction: (SepF/Cont/Sonc) _____

Date Analyzed: 03/15/95

GPC Cleanup: (Y/N) N pH: _____

Dilution Factor: 1.00

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) total ug

87-86-5-----	Pentachlorophenol	0.7	5
56-55-3-----	Benzc(a)anthracene	0.3	
218-01-9-----	Chrysene	0.6	
205-99-2-----	Benzo(b)fluoranthene	0.5	
207-08-9-----	Benzo(k)fluoranthene	0.5	
50-32-8-----	Benzo(a)pyrene	0.3	
193-39-5-----	Indeno(1,2,3-cd)pyrene	0.2	
53-70-3-----	Dibenz(a,h)anthracene	0.06	
191-24-2-----	Benzo(g,h,i)perylene	0.5	

FORM 1 SV-1

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Jm.B.
4/15/95

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

ACC-B01-950302

Lab Name: ROY F. WESTON, INC. Work Order: 04000-027-001-2

Client: EPA - SEATTLE

Matrix: AIR

Lab Sample ID: 9503S290-004

Sample wt/vol: (g/mL)

Lab File ID: .0FFQK17

Level: (low/med) LOW

Date Received: 03/06/95

% Moisture: not dec. dec.

Date Extracted: 03/08/95

Extraction: (SepF/Cont/Sonc)

Date Analyzed: 03/15/95

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.00

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) total ug

87-86-5-----	Pentachlorophenol	0.3	5
56-55-3-----	Benzo(a)anthracene	0.4	
218-01-9-----	Chrysene	0.7	
205-99-2-----	Benzo(b)fluoranthene	0.5	
207-08-9-----	Benzo(k)fluoranthene	0.5	
50-32-8-----	Benzo(a)pyrene	0.4	
193-39-5-----	Indeno(1,2,3-cd)pyrene	0.3	
53-70-3-----	Dibenz(a,h)anthracene	0.08	
191-24-2-----	Benzo(g,h,i)perylene	0.5	

FORM 1 SV-1

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JMB
4/13/95

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

ACC-B02-950302

Lab Name: ROY F. WESTON, INC. Work Order: 04000-027-001-2

Client: EPA - SEATTLE

Matrix: AIR

Lab Sample ID: 9503S290-005

Sample wt/vol: (g/mL)

Lab File ID: .OFFQK18

Level: (low/med) LOW

Date Received: 03/06/95

% Moisture: not dec. dec.

Date Extracted: 03/08/95

Extraction: (SepF/Cont/Sonc)

Date Analyzed: 03/15/95

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.00

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) total ug

87-86-5-----	Pentachlorophenol	0.8	5
56-55-3-----	Benzo(a)anthracene	0.4	8
218-01-9-----	Chrysene	0.8	5
205-99-2-----	Benzo(b)fluoranthene	0.5	2
207-08-9-----	Benzo(k)fluoranthene	0.5	5
50-32-8-----	Benzo(a)pyrene	0.4	5
193-39-5-----	Indeno(1,2,3-cd)pyrene	0.3	5
53-70-3-----	Dibenz(a,h)anthracene	0.06	5
191-24-2-----	Benzo(g,h,i)perylene	0.5	5

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4/18/95

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

ACC-B03-950302

Lab Name: ROY F. WESTON, INC. Work Order: 04000-027-001-2

Client: EPA - SEATTLE

Matrix: AIR

Lab Sample ID: 9503S290-006

Sample wt/vol: _____ (g/mL) _____

Lab File ID: .OFFQK19

Level: (low/med) LOW

Date Received: 03/06/95

% Moisture: not dec. _____ dec. _____

Date Extracted: 03/08/95

Extraction: (SepF/Cont/Sonc) _____

Date Analyzed: 03/15/95

GPC Cleanup: (Y/N) N pH: _____

Dilution Factor: 1.00

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) total ug

87-86-5-----	Pentachlorophenol	0.7	5
56-55-3-----	Benzo(a)anthracene	0.4	
218-01-9-----	Chrysene	0.7	
205-99-2-----	Benzo(b)fluoranthene	0.5	
207-08-9-----	Benzo(k)fluoranthene	0.6	
50-32-8-----	Benzo(a)pyrene	0.4	
193-39-5-----	Indeno(1,2,3-cd)pyrene	0.3	
53-70-3-----	Dibenz(a,h)anthracene	0.06	
191-24-2-----	Benzo(g,h,i)perylene	0.5	

FORM 1 SV-1

12/88 Rev.

J.M.B.
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